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REPORT OF ECA/UNEP PROJECT FOR THE INCORPORATION OF ENVIRONMENTAL COMPONENTS INTO THE TRAINING PROGRAMMES OF ECA-SPONSORED INSTITUTIONS

(Working Document)

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A. Background

1. This working document is a follow-up to the Second Meeting of the ECA Joint Intergovernmental Regional Committee on Human Settlements and Environment, held on 16-21 January 1984, Addis Ababa, Ethiopia, as it relates to environmental education and training activities in the Africa Region.

B. Legislative authority

2. The United Nations Environment Programme(UNEP) in recognition of the importance of manpower development for the management and protection of the environment, its (UNEP) Governing Council has passed several decisions regarding environmental education and training in the African Region. UNEP/GC.9/12 decision of May 1981, identified environmental education and training, and technical assistance as a priority for development. 1/

3. Also at the tenth session of UNEP Governing Council held in Nairobi 20-31 May 1982, decision 10/25 (A) on environmental education and training in Africa was passed. 2/ The decision advised on the incorporation of environmental component into the curricula of all institutions of learning at all level of education and into adult education and to identify and promote national, regional and subregional institutions and programme offering environmental education and training in the Africa Region. 3/

4. This also requested the Executive Director of UNEP to convene a meeting of experts from governments and the Scientific Community within the Region to develop a programme of action for environmental education and training in the Africa Region. The meeting of Experts from Government and the Scientific Community to Develop a Programme of Action for Environmental Education and Training in the African Region was held in Nairobi, Kenya, 12-15 April 1983.

5. At this meeting, the Environment Co-ordination Office at UNECA presented document E/ECA/ENV/8 entitled "Incorporation of Environmental Components into Training Programmes of ECA-sponsored Institutions". This document stressed that one of the most appropriate methods to promote environmental education and training aid and hence, create environmental awareness was to utilize existing ECA-sponsored institutions as a delivery system.

1/ UNEP Governing Council Ninth Session draft report UNEP/GC.9/15, June 1981.

2/ UNEP Governing Council Tenth Session Report of the Governing Council, UNEP/GC.10/14, 15 June 1982.

3/ Ibid.

6. As a follow-up to these activities regarding environmental education and training in Africa, the United Nations Economic Commission for Africa (UNECA) Environment Section developed a project proposal "Introducint environmental components into the training programme of ECA-sponsored institutions". The objective of the project was to implement ECA's Plan of Action for environmental education and training in Africa. This project proposal was sent to UNEP for funding to be implemented jointly by ECA and UNEP. The project was funded by UNEP on 30 October 1984. This working document is, therefore, a progress report regarding the implementation of the ECA's Action Plan for environmental education and training in Africa.

C. The UNEP/ECA project on "Introducing Environmental Components into the Training Programmes of ECA-sponsored Institutions"

Objectives:

7. The long-term objective of the project is to develop a manpower core of environmentalists who will enhance national environmental awareness for the integration of environmental consideration into development planning that will eventually lead towards self-reliant environmental management practices in Africa. The immediate objective is to produce an enlightened class of policy-makers, decision-makers and other officials involved in development activities that may have environmental impact with the necessary environmental skills.

8. The following eleven (11) ECA-sponsored institutions have expressed their willingness to incorporate environmental dimensions into their existing training programmes, therefore, they are the participating agencies in the implementation of the ECA Action Plan for environmental education and training.

(1) African Institute for Higher Technical Training and Research (AIHTTR), Nairobi, Kenya;

(2) Regional Centre for Services in Surveying, Mapping and Remote Sensing (RCSSMRS), Nairobi, Kenya;

(3) African Regional Organization for Standardization (ARSO), Nairobi, Kenya;

(4) African Regional Centre for Engineering Design and Manufacturing (ARCEDEM), Ibadan, Nigeria;

(5) Regional Centre for Training in Aerial Surveys (RECTAS), Ile-Ife, Nigeria;

(6) Institute pour la formation et de recherche demographique (IFORD), Yaounde, Cameroun;

(7) The African Development Bank (ADB), Abidjan, Ivory Coast;

(8) Institute for Economic Development and Planning (IDEP), Dakar, Senegal;

(9) African Regional Centre for Technology (ARCT), Dakar, Senegal;

(10) African Remote Sensing Centre (ARSC), Ouagadougou, Burkina Faso;

(11) African Centre for Applied Research and Training in Social Development (ACARTSOD), Tripoli, Libya.

9. For the purpose of implementation, the joint UNEP/ECA project is divided into two (2) main phases:

(a) Phase I

This phase of the project consists of (i) the development of training materials and data collection, and (ii) identification and hiring two environmental education and training curriculum development experts for a period of one work-month. The two curriculum development experts will do the following:

(i) develop a core curriculum on environmental training to be introduced into the training programmes of each of the eleven (11) ECA-sponsored institutions;

(ii) Assist in organizing a one-week-training-wirkshop for twenty-two instructors (22), two (2) from each of the eleven institutions on conjuction;

(iii) on conjuction with UNEP and ECA Environment Section, help conduct the one-week workshop at the ADB in Abidjan;

(iv) during the training workshop, assist the instructors from each institutions to utilize the core curriculum to develop specific environmental curriculum as it relates to his/her institution.

(b) Phase II

Phase II includes (i) the publication of the developed core curricula and (ii) the actual incorporation of environmental dimensions into the training programmes of each participating institutions.

Implementation

10. Phase I of the project is now being implemented. The survey mission to nine (9) of the eleven (11) ECA-sponsored institutions was conducted from 24 February - 3 March 1985. Prior to the survey mission, a comprehensive questionnaire (see appendix I) was developed and sent to all participating institutions. The main objective of the questionnaire and hence the mission to collect the questionnaire were:

(i) To develop a profile of each institution;

(ii) To obtain information about the content of courses taught during the regular training programmes of each institution;

(iii) To ascertain the financial implication of incorporation environmental components into regular training programmes of each institution.

11. Two institutions of the eleven (11) ECA-sponsored institution: (i) African Remote Sensing Centre (ARSC) in Ouagadougou, Burkina Faso, and (ii) institut pour la formation et de recherche demographique (IFORD) in Yaounde, Cameroun have not responded to any of the correspondence regarding the incorporation of environmental components into their existing training programmes. Even though, in 1982, they have expressed their interest in the programmes.

12. The nine institutions visited by the survey mission were very receptive regarding the importance of developing environmental awareness in Africa through existing training institutions. To properly incorporate environmental education and training into the existing training programmes of the ECA-sponsored institutions, it will require at the initial stage to establish core environmental library at each of the participating institutions.

13. As a result of ECA Environment Section's efforts during the past three years (1982-1984) to introduce environmental considerations into both training and project activities of the African Development Bank (ADB), the Bank has employed a full time staff as an environmental co-ordinator. Presently, the environmental co-ordinator of the Bank is developing the modality, policy and concept of environmental management at the ADB.

14. The ADB has also agreed to host the ECA/UNEP Environmental Curriculum Devemopment Workshop for twenty-two (22) participants, two (2) from each of the eleven (11) ECA-sponsored institutions. The workshop is planned to be held 18-23 November 1985 in Abidjan, Ivory Coast.

15. From the findings of the survey mission, the following suggestions are being made as a possible point of departure for developing a general approach to preparing a curriculum for environmental education and training for the participating ECA-sponsored institutions.

D. Suggested outlines of the environmental curriculum to be developed

16. The field of environmental management as a body of knowledge should stress the following subject areas:

(a) Value and perceptions

(b) Ecology

(c) Environmental effects

(d) Environmental indicators

(e) Environmental impact assessment methodology

(f) Monitoring

(g) Growth and its implications for the future

(h) Economics of externalities

(i) Environmental law

(j) Administrative processes

(a) Value and perceptions

17. In order to formulate a plan which is to be responsive to people's present and future wants, the planners should identify their present values and inquire about how these values will change in the future. In other words, an environmental curriculum should address how current environmental issues and problems are perceived by the people whom the curriculum is intended to change attitudes and hence create environmental protection awareness. The objective of this subject area is to draw the attention of the learner (participant) to the importance of knowing people's values and perceptions in planning and decision-making.

(b) Ecology

18. Since all human development activity takes place in some conjunction with natural systems, it is important to have a firm understanding of ecological limitations if development is to be properly managed. To fully appreciate the dynamic processes which may produce or act to distrub stability in the biosphere, it becomes essential to have a fundamental knowledge of understanding biological mechanisms.

(c) Environmental effects

19. This subject area relates environmental effects to their causes. Associated with an activity is a set of fairly obvious direct or primary effects. The purpose of adding this subject area in the curriculum is to exposed environmental managers to the complexity of the environment.

(d) Environmental indicators

20. As concern of environmental quality increases, there is an awareness growing in Africa among decision-makers, and the public at-large that more accurate and objective information on the status and trends of the environment is necessary to improve the formulation, implementation and communication of environmental policy.

(e) Environmental impact assessment (EIA) methodology

21. To make EIA operative, an environmental manager should be able to systematically identify, predict, and evaluate all probable impacts of an activity. This subject area ought to outline the procedures to analyze objectively the impacts of an activity and to evaluate alternatives.

(f) Monitoring

22. It is apparent that monitoring processes can serve a crucial role in providing adequate assessment capability for a given issue. Results from monitoring systems can provide the key factor in many problem assessment areas of environmental management, from initial problem definition (eg. the carrying capacity of a given land area for extensive industrial development). An environmental curriculum, therefore, should take into consideration the monitoring process.

(g) Growth and its implications for the future

23. Development of a comprehensive approach to environmental management concepts in an educational format requires some exposure to the underlying perspectives of broad-scale social behaviour and trends. In the area of environmental management, the processes with which the ECA-sponsored training institutions should be most interested are those that describe the past and present physical development modes of society and the various social motivations for these modes. This is because physical development modes provide the setting within which values are established and environmental disruptions result, and are perceived.

(h) Economics of externalities

24. Almost any proposal for environmental policy analysis requires the considerations of economic and technical implications, therefore, understanding of the fundamentals of economic system is essential for the environmental managers and that knowledge is pre-requisite to the information in this subject area.

(i) Environmental law

25. With respect to protecting environmental values, old concepts of the colonial era in Africa of common law including nuisance, trespass, and negligence are not sufficient today. These concepts were formulated during an expansionary era in western society, and often reflected the view that resources were inexhaustible. The reason for suggesting this subject area is to focus on an examination of the functional value of the law to meet societal needs to protect the environment.

(j) Administrative processes

26. Environmental management can be considered as a process of discovering, analyzing, and making decisions about issues and problems concerning man's impact on his environment and its resources. For environmental management it is necessary to study the functions of administrative organizations from the perspective of how environmental control policies and strategies are formulated.

27. Based on the above concepts and outlines, two consultants, one specializing in environmental management and the other an expert in environmental curriculum development are now being identified to be contracted from 28 October - 23 November 1985, for the purpose of complementing the implementation of Phase I of the ECA/UNEP project.

APPENDIX I

UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA (UNECA)

Social Development, Environment and Human Settlement Division

Environment Section

Survey questionnaire for the incorporation of environmental dimensions into the regular training programmes of the ECA-sponsored institutions

I. GENERAL INFORMATION

A. Name and address of the respondent _____

_____

_____

_____

_____

B. When was the institution established? _____

_____

_____

C. Names of professional staff employed full-time _____

_____

_____

_____

_____

_____

D. When does your school year start and end - from _____

month to _____ month _____

_____

_____

E. Please designate particulars below of two instructors to be trained at a 1-week special workshop as environmental instructors in addition to their present assignment.

(i) 1. Name of the instructor

_____

2. His or her discipline

_____

3. Area presently taught

_____

4. His or her educational achievement

(a) High School graduate _____

(b) Teacher's Training certificate _____

(c) College (B.Sc.) _____

(d) Masters _____

(e) Ph.D. _____

(ii) 1. Name of the instructor

_____

2. His or her discipline

_____

3. Area presently taught

_____

4. His or her educational achievement

(a) High School graduate _____

(b) Teacher's Training certificate _____

(c) College (B.Sc.) _____

(d) Masters _____

(e) Ph.D. _____

F. We are suggesting the below listed period to hold the 1-week environmental training and awareness workshop for two designated instructors from each of the (11) eleven ECA-sponsored institutions. Please state if this period is appropriate for your institution.

1 week workshop

8-12 April, 1985

II. COURSES TAUGHT

A. Is your inscitution presently teaching any subject related to environmental issues? If yes, please give the course title and the number of hours taught per week

B. Please list the regular courses of your institution and the duration of each course

C. State the development sectors emphasized in your training programmes

D. Kindly attach a copy of the institution's curriculum

E. Which course or courses do you intend to incorporate environmental training component into?

F. How many lecture hours per week can your institution devote to environmental training?

III. STUDENT POPULATION AND CHARACTERISTICS

A. What is the average year of work experience and disciplines of your student population?

B. What is the minimum educational qualification required for enrolment?

_____

_____

C. What is your future student population projection?

_____

D. Give an analysis of the student population trained over the past 3 years (1981 - 1983)

_____

_____

_____

_____

E. What is the sex distribution of your student population?

	1981	1982	1983
1. Male			
2. Female			
3. TOTAL			

F. What is the geographic distribution of your student population?

	1981	1982	1983	Average
1. West Africa				
2. Southern Africa				
3. Northern Africa				
4. Eastern Africa				
TOTAL				

G. What is the occupational distribution of your past and present student enrolment during the same three year period (1981 - 1983) and now (1984)

Examples:	1981	1982	1983	1984
1. Technicians, scientists - from governments				
2. Policy-makers, politicians				
3. Civil servants				
4. Private sector				

H. What is the average age group of your student population?

	1981	1982	1983	1984
1. 18 - 25				
2. 25 - 35				
3. 35 - 45				
4. 45 and over				

I. Do you intend to change your target group in the near future? If so, what occupational group will you be catering for?

_____

_____

_____

IV. FINANCIAL

A. Approximately how much will it cost per academic year to introduce environmental training component into all and/or some selected existing subject areas being taught at your institution in terms of:

(i) fees for visiting lecturers/consultants

_____

_____

_____

(ii) provision of environmental teaching materials

_____

_____

(iii) local transportation of students to visit sites with environmental problems

_____

_____

_____

B. Does the institution sometime use the service of visiting lecturer? If yes, in what subject area, and what is the remuneration per hour?

_____

_____

_____